Physicists want to understand how things work, in every detail and at the deepest level. The ability to analyze even unfamiliar problems is sought by employers in many fields. Physicists study elementary particles, nuclei, atoms, molecules, living cells, plasmas, organisms, the human brain, complex systems, supercomputers, the atmosphere, planets, stars, galaxies, and the universe itself.

The Department of Physics at the University of Regina offers programs leading to the BSc and BSc Honours degrees in Pure and Applied/Industrial Physics, and the MSc and PhD degrees in Experimental and Theoretical Subatomic Physics. Co-operative Education programs with local industry play an important role in our undergraduate degree programs.

Physics research teams pursue their research locally, as well as elsewhere in Canada, the United States, Europe, and Japan.
THE DEPARTMENT OF PHYSICS OFFERS THE FOLLOWING ACADEMIC PROGRAMS:
Diploma in General Science
BSc Physics
BSc Hons Physics
BSc Applied Physics

CAREER POSSIBILITIES
Aeronautics & Space Industries
Astronomer
Astrophysicist
Biophysics
Computers/Information Technology
Design Development
Geophysicist
Health Physicist
Industrial Physicist
Management/Administration
Medical Physicist
Laser Technician
Meteorology
Nanotechnology
Physicist
Synchrotron Research
Telecommunications
X-Ray Crystallographer

COURSE HIGHLIGHT

PHYS 342 - Atomic Physics
Operator formalism of modern quantum mechanics, commutation relations, the Schrodinger equation and its applications for the harmonic oscillator and one-dimensional potentials, central fields, the hydrogen atom and complex atoms.

PHYS 401 - Quantum Mechanics I
Axiomatic formulation, representations, angular momentum and spin, perturbation theory, systems of identical particles, and matrix mechanics.

PHYS 442 - Introduction to Elementary Particle Physics
Classification of particles, particle detectors and accelerators, invariance and conservation laws, hadron-hadron interactions, weak interactions, quark model and group theory, and introduction to QCD.

PHYS 492AA - Stellar Structure and Evolution
The physics of stellar interiors and stellar evolution will be reviewed. The course will look at the development of the equations of stellar structure and the methods by which they can be solved. The evolution of our Sun, from formation through to its white dwarf stage will be investigated.

RECOMMENDED FIRST YEAR COURSES

Chemistry 104
Computer Science 110
English 100
English 110
Mathematics 110
Mathematics 111
Mathematics 122
Physics 111
Physics 112

*Always check that you meet course prerequisite requirements.

HIGH SCHOOL ADMISSION REQUIREMENTS FOR THE FACULTY OF SCIENCE

5 Grade 12 courses including:
- English A30
- English B30
- Pre-Calculus 30

and at least two of:
- Biology 30
- Calculus 30
- Chemistry 30
- Computer Science 30
- Physics 30

A High School Average of 70% across these five courses is required.

Note: Students who are missing a course, or who have an average between 65% and 69.9% are eligible for the Faculty of Science Qualifying Program.